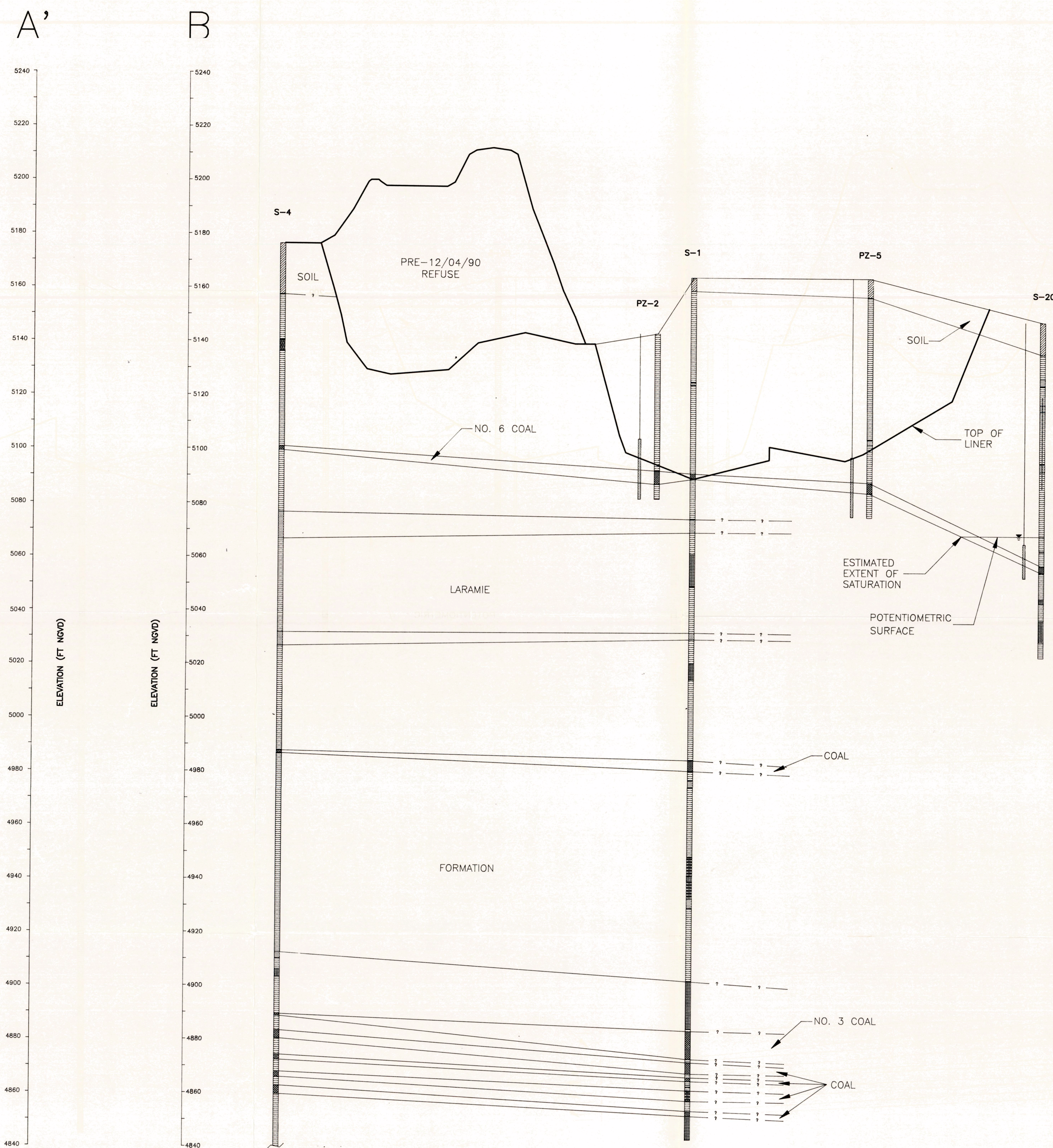


LOOKING NORTH

FIGURE 2.3.2.2



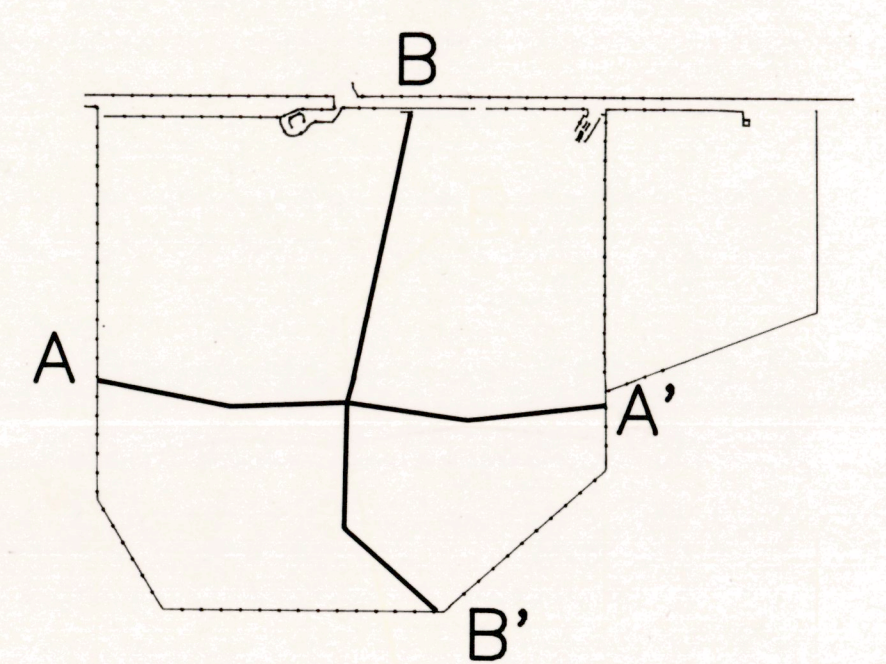
LOOKING EAST

FIGURE 2.3.2.3

EXPLANATION

- WATER LEVEL ON 06/02/93
- EFFECTIVE SCREENED INTERVAL
- SOIL/FILL
- REFUSE
- CLAYSTONE/SILTSTONE
- SANDSTONE
- COAL
- SANDSTONE/CLAYSTONE/SILTSTONE
- IRONSTONE
- CLAYSTONE/COAL

SCALE: 1 INCH = 200 FEET HORIZONTAL
1 INCH = 20 FEET VERTICAL



CROSS SECTION
LOCATION DIAGRAM

DOTY & ASSOCIATES	1202-20	09/07/94
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DOTY & ASSOCIATES

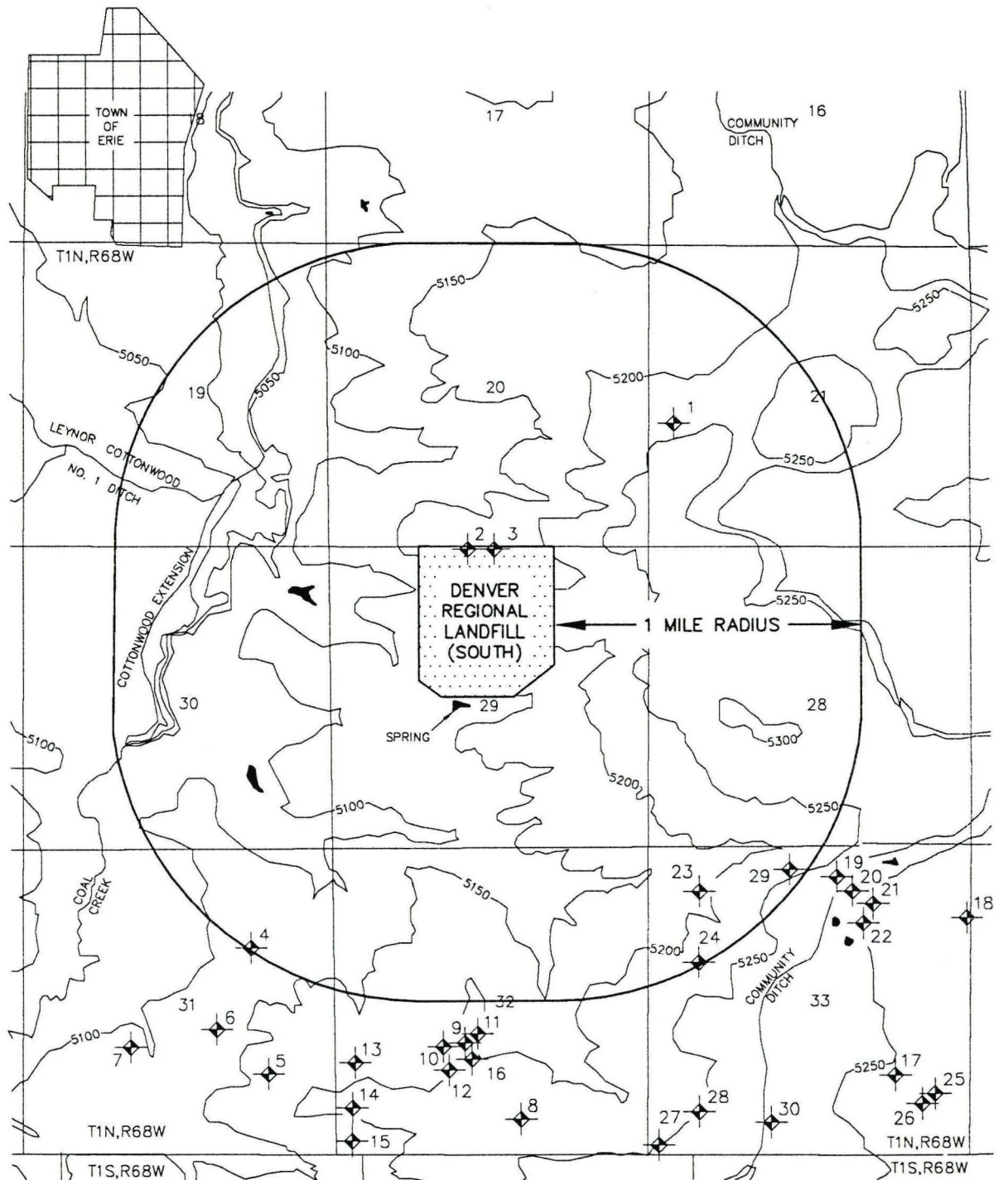


DOTY & ASSOCIATES

FIGURE 2.7.1

PERMITTED WELLS IN SITE VICINITY

DOTY & ASSOCIATES 1202-20 09/15/94

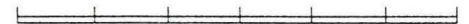


EXPLANATION

◆ 9 PERMITTED WELL.
NUMBER REFERS TO TABLE
IN TEXT.



0 1000 2000 3000 4000 5000 6000



SCALE IN FEET

CONTOUR INTERVAL: 50 FEET

TOPOGRAPHY FROM THE EASTLAKE, ERIE, FREDERICK AND
LAFAYETTE, COLORADO, USGS 7.5 MINUTE QUADRANGLE SERIES

FIGURE 3.1.3.1

LIDLAW WASTE SYSTEMS	GROUNDWATER SAMPLING FIELD DATA SHEET
Well Number: _____ Sample I.D.: _____ <small>(if different from well no.)</small>	
Project: _____ Personnel: _____	Date: _____ Time: _____ Weather Conditions: _____ Air Temp: _____
WELL DATA: Casing Diameter: _____ <input type="checkbox"/> Stainless Steel <input type="checkbox"/> Steel <input type="checkbox"/> PVC <input type="checkbox"/> Teflon® <input type="checkbox"/> Other: _____ Intake Diameter: _____ <input type="checkbox"/> Stainless Steel <input type="checkbox"/> Galv. Steel <input type="checkbox"/> PVC <input type="checkbox"/> Teflon® <input type="checkbox"/> Open rock DEPTH TO : Static Water Level: _____ Bottom of Well: _____ DATUM: <input type="checkbox"/> Top of Protective Casing <input type="checkbox"/> Top of Well Casing <input type="checkbox"/> Other: CONDITION: Is Well clearly labeled? <input type="checkbox"/> Yes <input type="checkbox"/> No Is Prot. Casing in Good Cond.? (not bent or corroded) <input type="checkbox"/> Yes <input type="checkbox"/> No Does Weep Hole adequately drain well head? <input type="checkbox"/> Yes <input type="checkbox"/> No Is Concrete Pad Intact? (not cracked or frost heaved) <input type="checkbox"/> Yes <input type="checkbox"/> No Is Padlock Functional? <input type="checkbox"/> Yes <input type="checkbox"/> No Is inner Casing Intact? <input type="checkbox"/> Yes <input type="checkbox"/> No Is Inner Casing Properly Capped and Vented? <input type="checkbox"/> Yes <input type="checkbox"/> No VOLUME OF WATER: Standing in well: _____ To be purged: _____	
PURGE DATA: METHOD: Bladder Pump: <input type="checkbox"/> w/ packer <input type="checkbox"/> w/o packer <input type="checkbox"/> 2" Submersible Pump <input type="checkbox"/> Centrifugal Pump <input type="checkbox"/> Peristaltic Pump <input type="checkbox"/> Other: <input type="checkbox"/> Teflon® <input type="checkbox"/> Teflon® MATERIALS: Pump: <input type="checkbox"/> Stainless Steel Tubing/Rope: <input type="checkbox"/> Polyethylene <input type="checkbox"/> PVC <input type="checkbox"/> Polypropylene <input type="checkbox"/> Other: <input type="checkbox"/> Other: _____ Pumping Rate: _____ Elapsed Time: _____ Volume Pumped: _____ Was Well Evacuated? <input type="checkbox"/> Yes <input type="checkbox"/> No Number of Well Volumes Removed: _____ TIME SERIES DATA: Well Volumes: _____ Temp.: _____ pH: _____ Spec. Cond.: _____ PURGING EQUIPMENT: <input type="checkbox"/> Dedicated <input type="checkbox"/> Prepared Off-Site <input type="checkbox"/> Field Cleaned	
SAMPLING DATA: METHOD: Bladder Pump: <input type="checkbox"/> w/ packer <input type="checkbox"/> w/o packer <input type="checkbox"/> 2" Submersible Pump <input type="checkbox"/> Bailer <input type="checkbox"/> Other: _____ <input type="checkbox"/> Teflon® <input type="checkbox"/> Teflon® MATERIALS: Pump/Bailer: <input type="checkbox"/> Stainless Steel Tubing/Rope: <input type="checkbox"/> Polyethylene <input type="checkbox"/> PVC <input type="checkbox"/> Polypropylene <input type="checkbox"/> Other: <input type="checkbox"/> Other: _____ SAMPLING EQUIPMENT: <input type="checkbox"/> Dedicated <input type="checkbox"/> Prepared Off-Site <input type="checkbox"/> Field Cleaned APPEARANCE: <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Color: <input type="checkbox"/> Contains Immiscible Liquid FIELD DETERMINATIONS: pH: _____ Meter Model: _____ Meter S/N: _____ Temperature: _____ Spec. Cond.: _____ Meter Model: _____ Meter S/N: _____ REMARKS: I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols. Signature: _____ Date: _____	

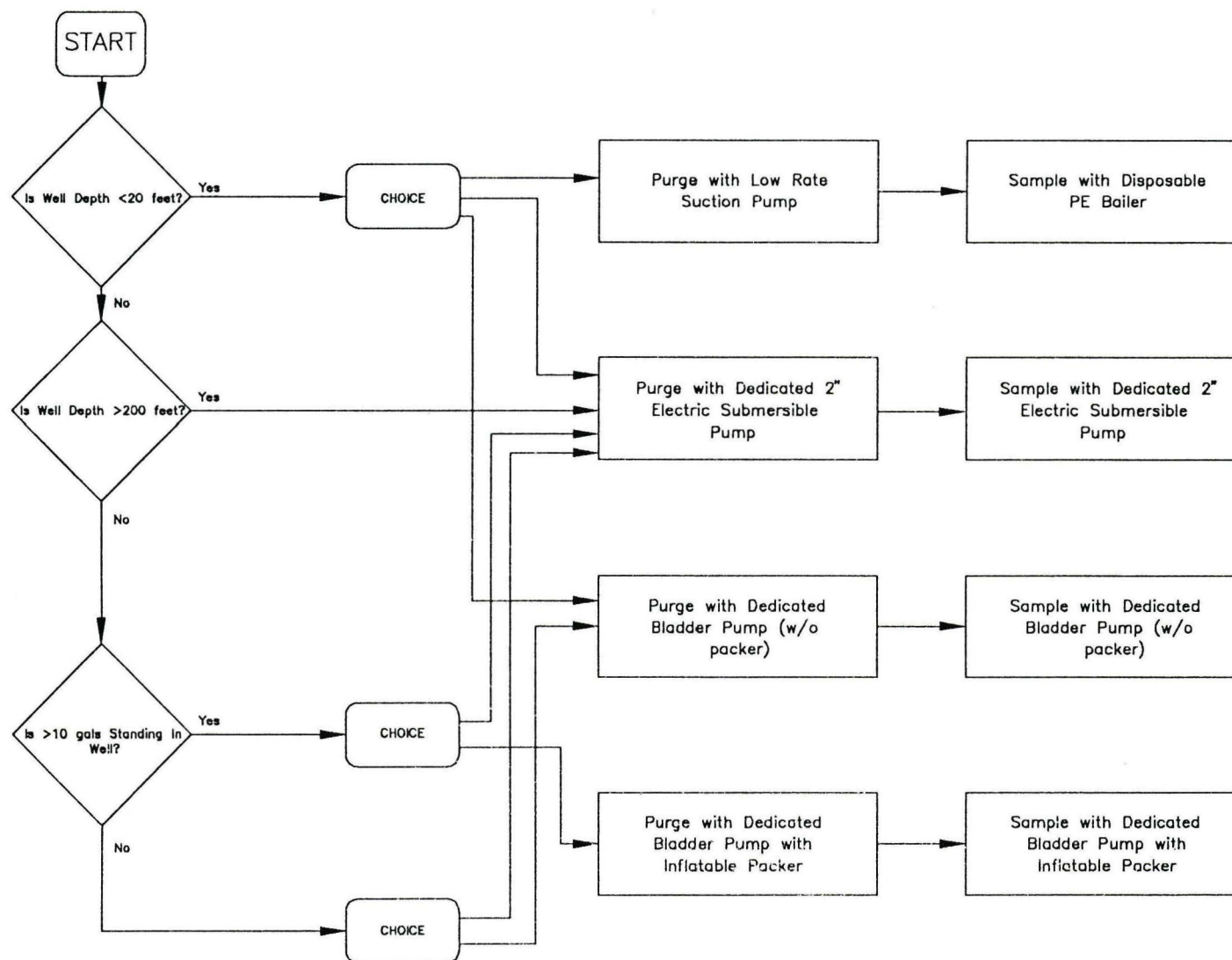


FIGURE 3.3.4.1

PURGING & SAMPLING FLOWCHART

APPENDIX B
ATTACHMENTS

ATTACHMENT 1

CHECKLIST FOR CHOOSING AN ENVIRONMENTAL LABORATORY

- ☐ Does the laboratory possess significant experience relevant to your particular program needs?
- ☐ Can the laboratory demonstrate possessing the necessary certifications to perform your type of environmental work?
- ☐ Is the laboratory certified for the particular tests or analytes required for your project?
- ☐ Will the laboratory supply a listing of certifications it holds along with agency contacts and phone numbers for verification purposes?
- ☐ Does the laboratory have sufficient redundancy in instrumentation to help prevent missed holding times or late reports if instruments experience operational problems?
- ☐ Is there sufficient analytical capacity (instruments and personnel) to complete projects in a timely fashion and not jeopardize sample holding times?
- ☐ Does the laboratory have a mechanism to track the general on-time performance of issued reports?
- ☐ Is there a written Quality Assurance Program?
- ☐ Does the Quality Assurance Program describe specific responsibilities of various individuals within the organization?
- ☐ Is there a designated Quality Assurance Manager?
- ☐ If there is a Quality Assurance Manager, are they always on site and is it a full-time position?
- ☐ Does the Quality Assurance Manager report to someone independent from daily operations?
- ☐ Does the Quality Assurance Manager conduct internal audits of the laboratory at some set frequency?
- ☐ If internal audits are conducted, is a standard checklist utilized?
- ☐ Does the Quality Assurance Manager generate Quality reports to upper management on some set frequency?
- ☐ Are written standard operations procedures (SOPs) in place for the analytical methods and general procedures they perform?
- ☐ Are audits from external agencies such as states available for your review?
- ☐ Does the laboratory participate in EPA sponsored lab proficiency programs such as Water Supply (WS) or Water Pollution (WP)?
- ☐ If so, will the laboratory provide the results of the proficiency testing for the last two test periods?
- ☐ Does the laboratory utilize a blind check sample program as part of their QA program?
- ☐ Does the lab have a formal, written "ethics policy" and if so, is it read and signed by all employees?
- ☐ Is the lab willing to provide copies of resumes of lab personnel for your review in order to assess their educational and experience levels?

ATTACHMENT 1 (Continued)

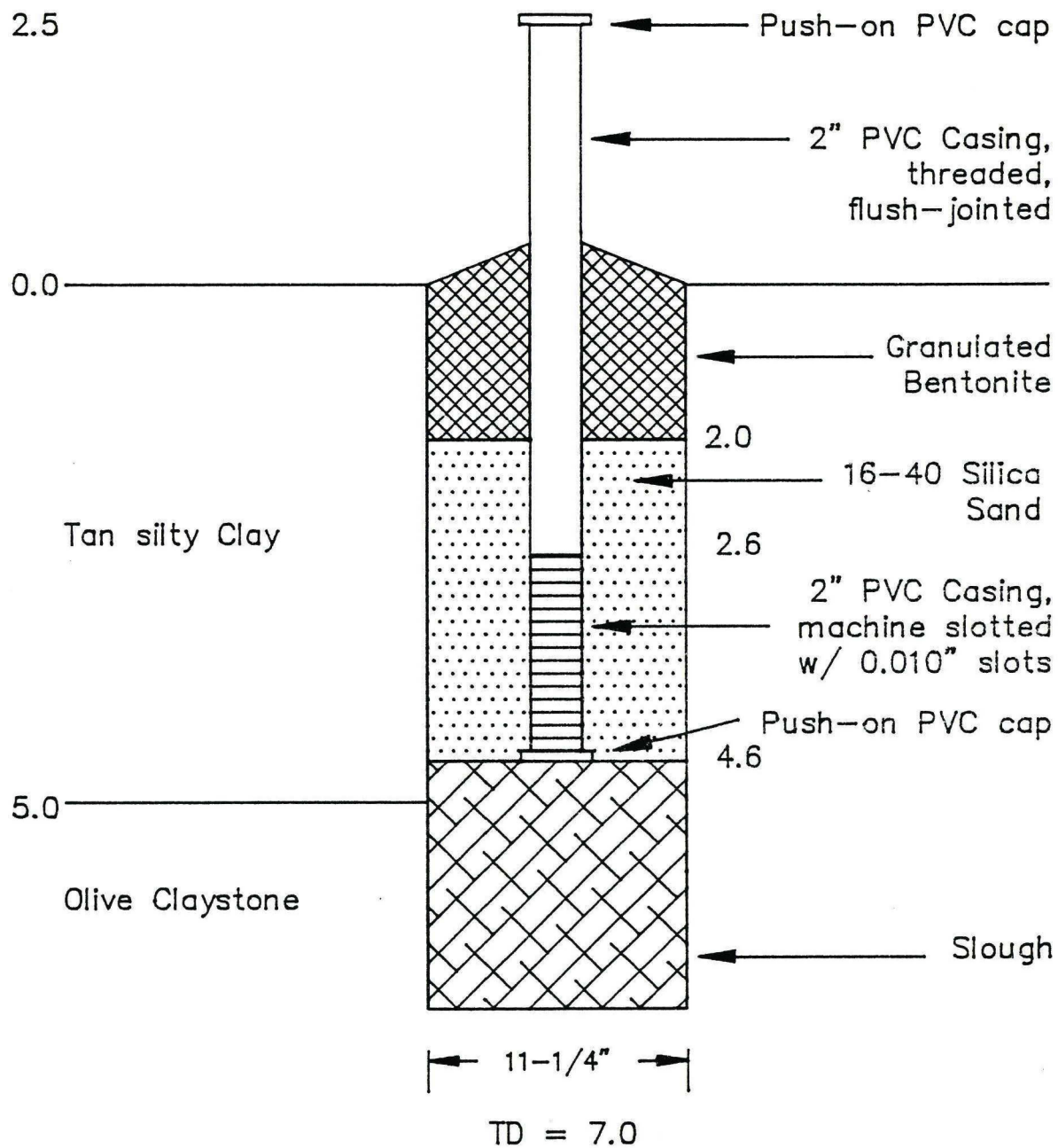
CHECKLIST FOR CHOOSING AN ENVIRONMENTAL LABORATORY

-
- ☐ Will the laboratory provide a listing of the QC information that will accompany your data in the final report? Typical items may include method blanks, field blanks, trip blanks, matrix spike, matrix spike duplicate and surrogate information.
 - ☐ Is the laboratory familiar with processing field samples under strict chain-of-custody for litigation requirements?
 - ☐ Is there a mechanism for the laboratory to process samples under an internal chain-of-custody system if required?
 - ☐ Is the laboratory facility maintained in a clean and orderly manner?
 - ☐ Does the laboratory have some form of security to prevent unauthorized entry to their facility?
 - ☐ Does the laboratory have some form of fire protection to prevent loss of human life, loss of samples and irreplaceable written records?
 - ☐ Is there a training program established for laboratory personnel and is training documented?
 - ☐ Does the lab have a formal corrective action process that is utilized to permanently fix problems that are identified either internally or externally?
 - ☐ Does the lab possess a document control system which is utilized to track, revise and archive various laboratory information such as SOPs, data logbooks, electronic tapes, analytical reports, etc.?
 - ☐ Do SOPs properly reflect the procedures that are actually being followed on a daily basis?
 - ☐ Does the lab have a mechanism to track the status of samples in order to prevent missed holding times and late reports?
 - ☐ Does the lab have some mechanism to prevent contamination of samples with volatile solvents utilized in the laboratory?
 - ☐ Can the lab demonstrate through refrigerator storage blanks or trip blanks that contamination of samples with volatile solvents is not occurring?
 - ☐ If the lab does utilize subcontractors, do they acknowledge that in the final data report and identify which analyses were not performed by their lab?
 - ☐ Will the lab provide information which will allow you to evaluate the possibility of lab contamination of samples?
 - ☐ Does the laboratory employ more than one level of data review prior to authorizing data to be released to a client?
 - ☐ Are the temperatures of lab equipment such as ovens, refrigerators and freezers monitored daily to ensure proper temperatures are maintained.?
 - ☐ Does the laboratory have a policy disallowing blank subtraction from sample results?

Source: IEA

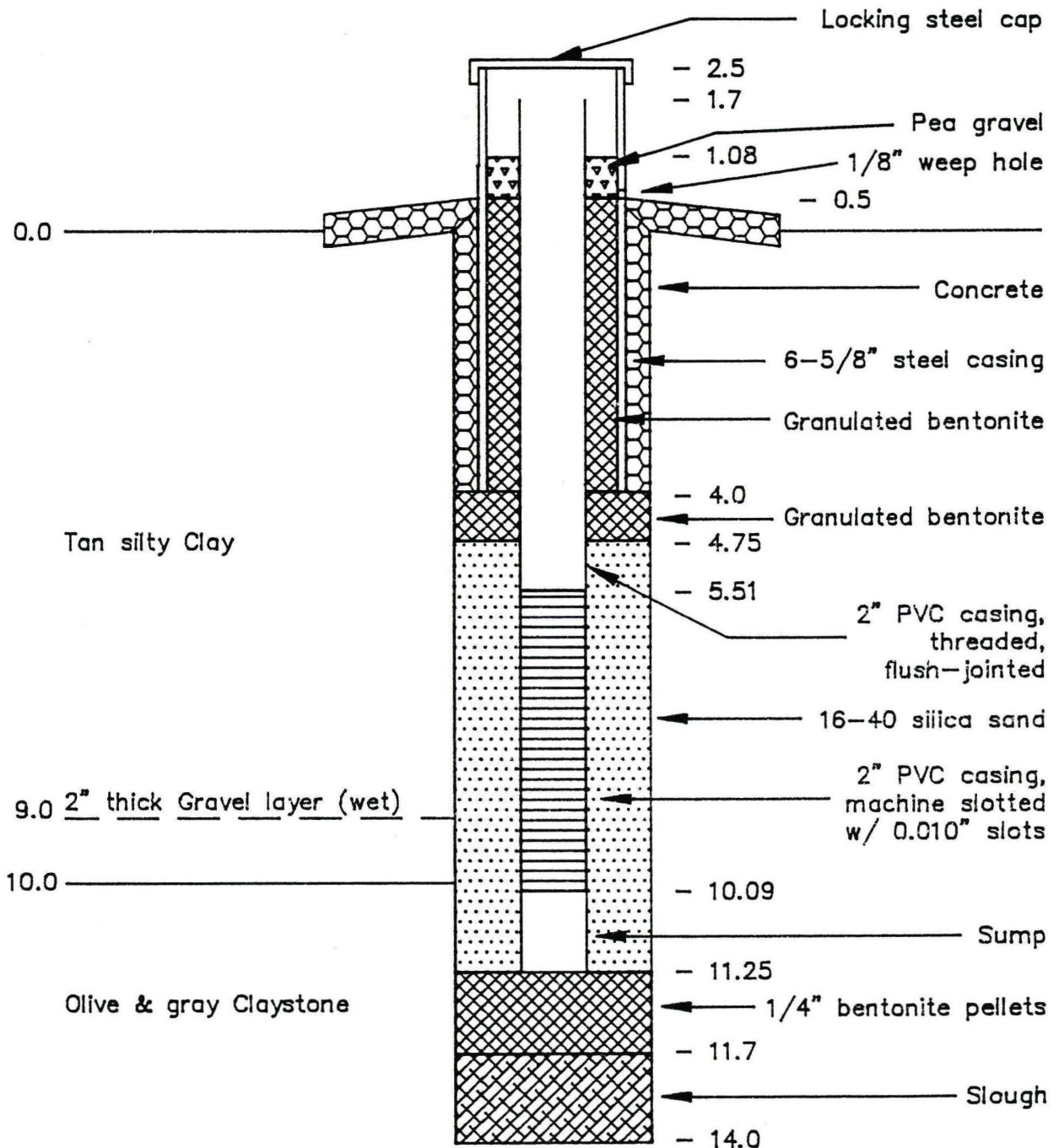
APPENDIX C
WELL COMPLETION DIAGRAMS

P-1 COMPLETION DIAGRAM



All distances in feet from ground surface.

P-2 COMPLETION DIAGRAM



Notes:

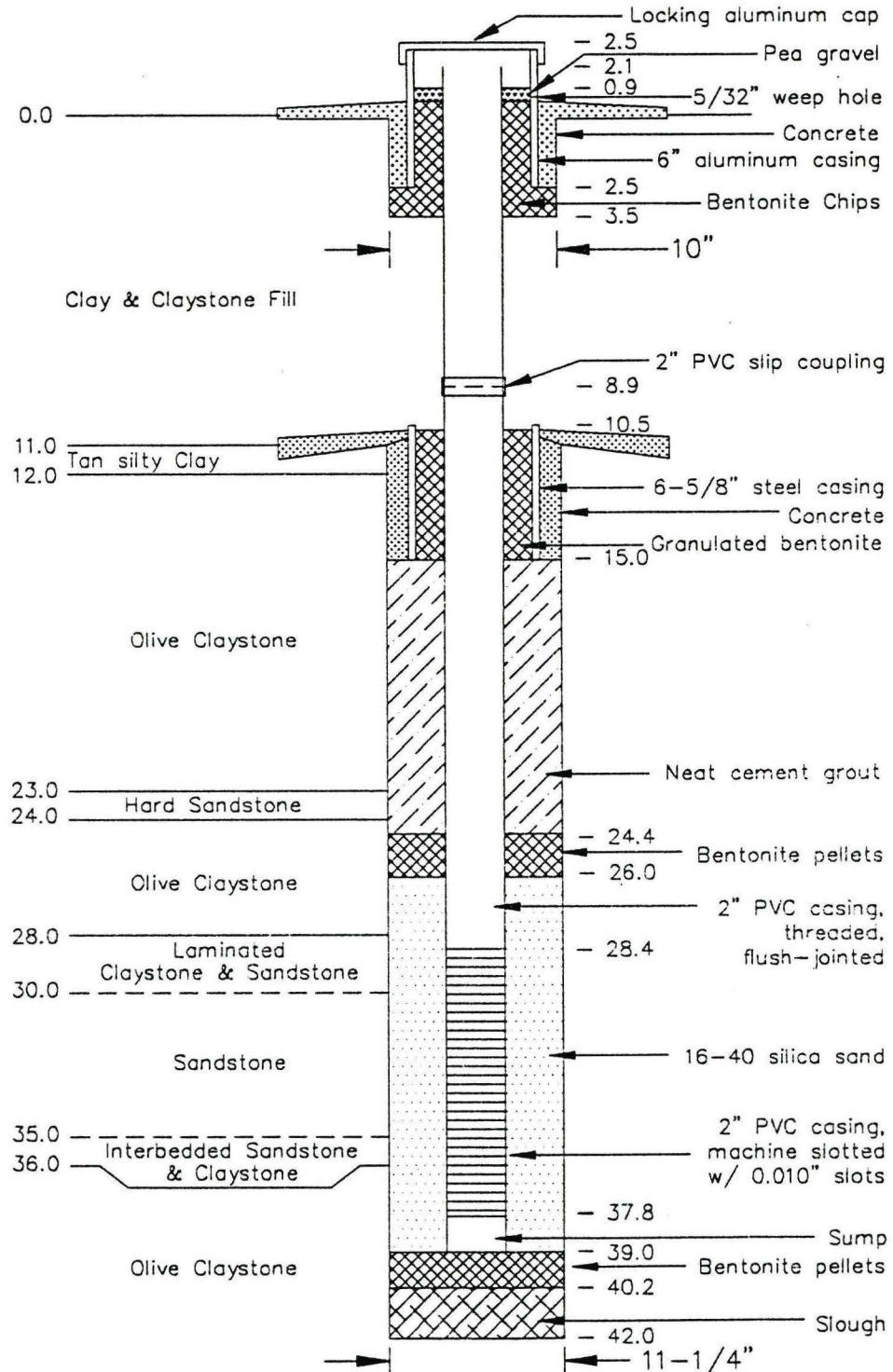
1. All distances in feet from ground surface.
2. Concrete surface pad was placed as a separate pour from the annular concrete and was separated from the annular concrete and the steel surface casing by a layer of polyethylene sheeting.

DOTY & ASSOCIATES

1202-03

01/19/90

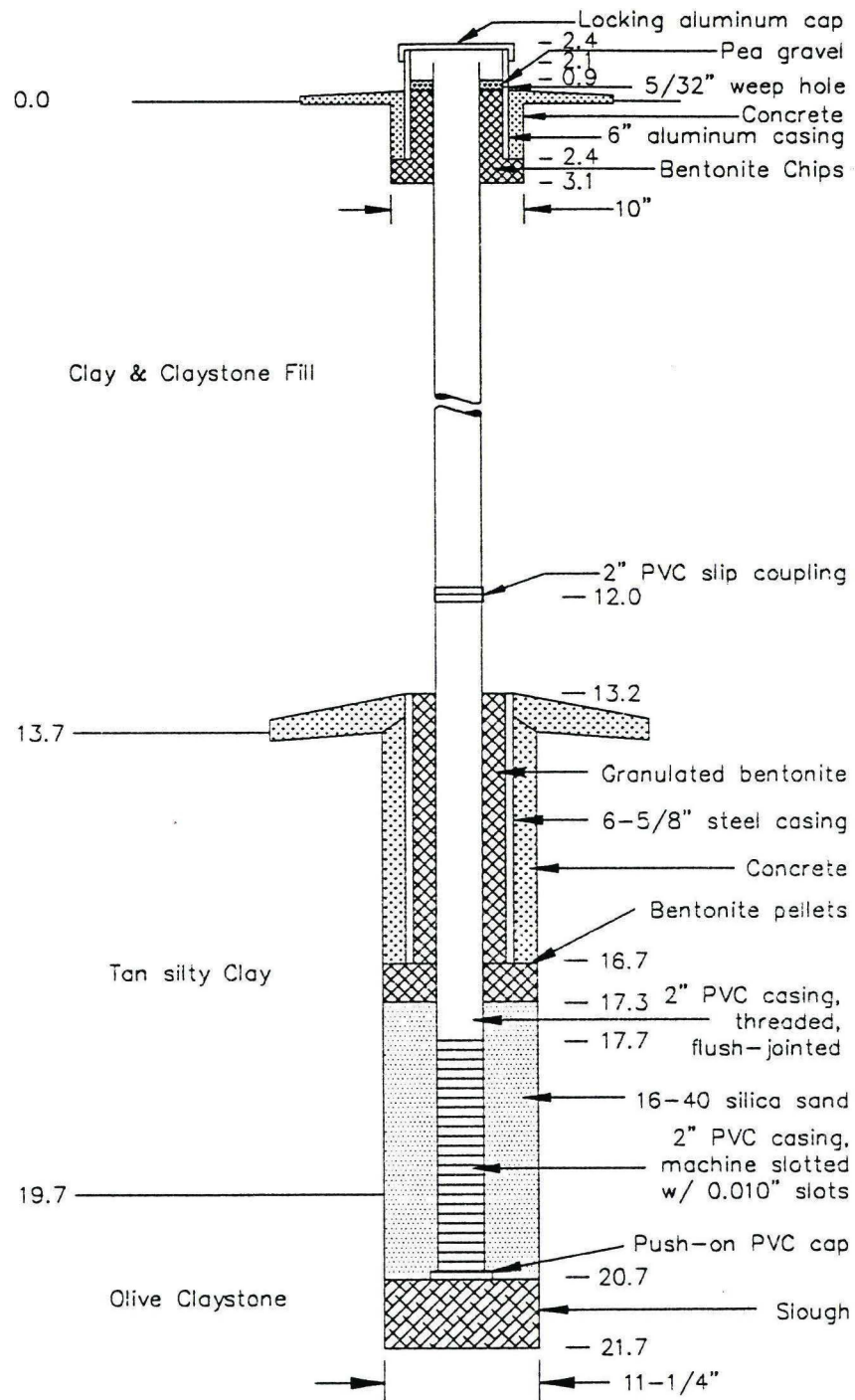
P-3 COMPLETION DIAGRAM (AFTER EXTENSION)



Notes:

1. All distances in feet from ground surface.
2. Drawing is not to scale.
3. Well extended 3-24-94.
4. Concrete surface pad from original construction was left in place.
5. PVC slip coupling connection secured w/ stainless steel set screws and wrapped w/ polyethylene sheeting.

P-4 COMPLETION DIAGRAM (AFTER EXTENSION)



Notes:

1. All distances in feet from ground surface.
2. Drawing is not to scale.
3. Well extended 3-17-94.
4. Concrete surface pad from original construction was left in place.
5. PVC slip coupling connection secured w/ stainless steel set screws and wrapped w/ polyethylene sheeting.

04/13/94

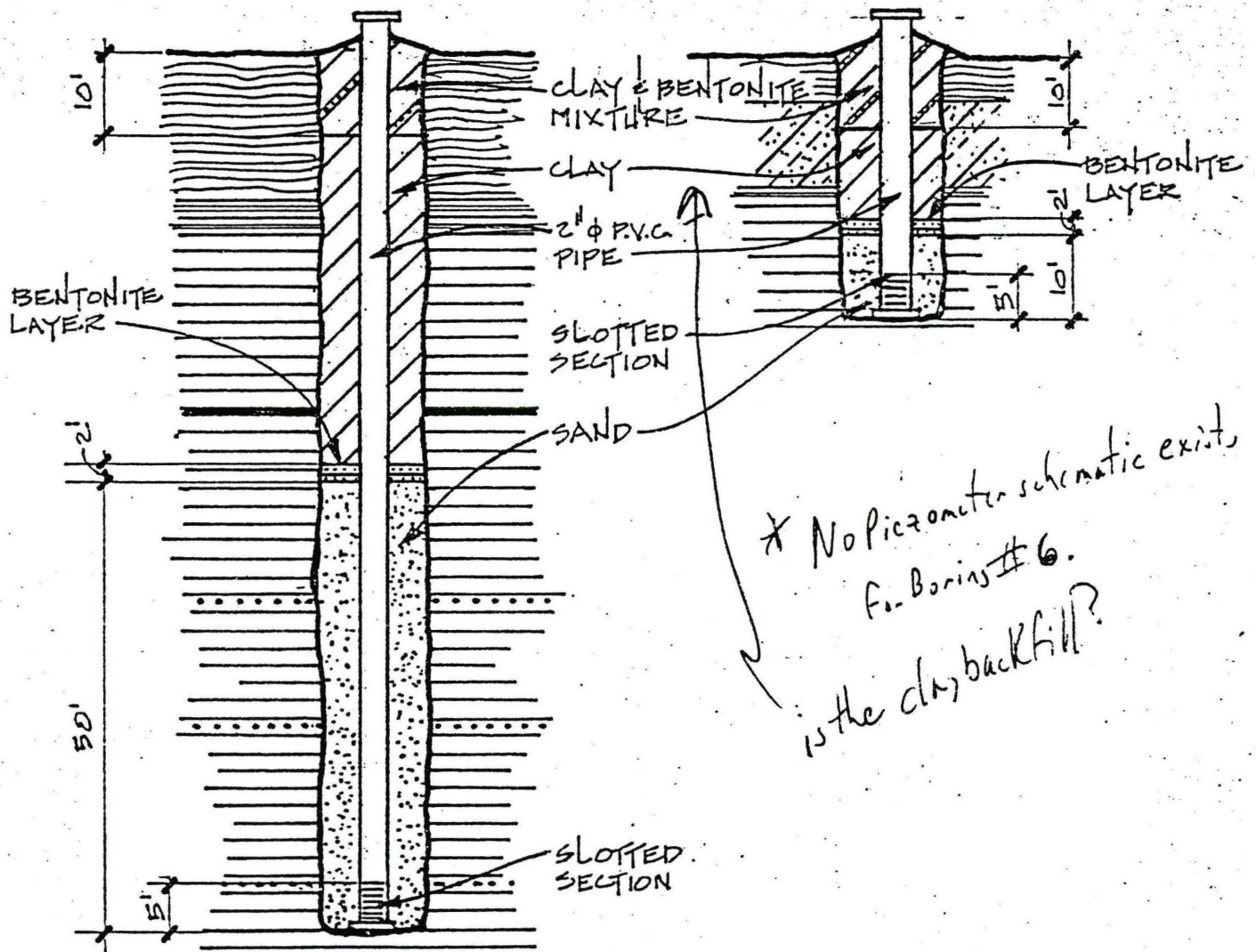
1202-11

DOTY & ASSOCIATES

PIEZOMETER TYPICAL SECTION

BORINGS 1 & 9

BORINGS 7 & 8



Monitor Well Data Sheet

Monitor Well I.D. No. A1

Permit No. _____

Latitude : _____

Longitude : _____

Well Boring Diameter : 8"

Ground

Surface Elevation : 5222.12

Report all Depths from
Surface Elevation

Well Depth : 70'

Water Level Elevation : NONE

Screen Bottom:

(1) Depth : 60'-70'

(2) Elevation : _____

8/12 SAND Gravel Pack

(1) Depth : 9.5' - 70'

(2) Elevation : _____

SKETCH:

Type of Locking Device: PADLOCK (KEY)

Type of Casing Protection : 6" STEEL PROTECT

Type of Surface Pad:
CONCRETE/BENTONITE
MIXTURE

Top of Protective Collar Elevation: 5224.46'

Top of Casing Elevation: 5224.0'

Surface
Elevation: 5222.12'

Type of Surface Grout:
CONCRETE/BENTONITE MIX
Depth: 0-6.25'

Casing Type PVC

Size (dia) : 4"

Gauge : SCH. 40

Backfill Material: CONCRETE/BENT.
MIX

NOTE: Use Flush Screw Joint Casing Only 4" or larger
Recommend Teflon Tape of joints

Bentonite Seal ----->

Bentonite Seal Top Depth: 6.25'
Elev: 5215.87'

Gravel Pack ----->

Gravel Pack Top Depth: 9.5'
Elev: 5212.62

Well Screen----->

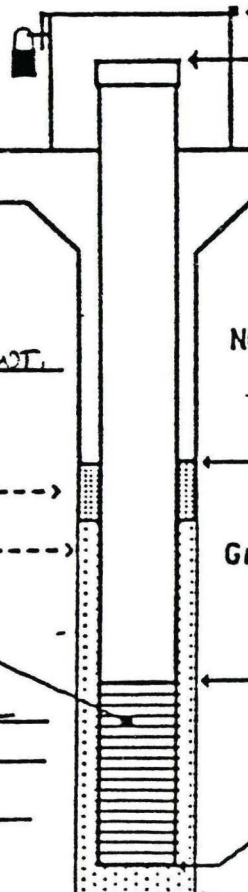
Type of Well Screen: SLOTTED PVC

Top of Screen Depth: 60'
Elev: 5162.12

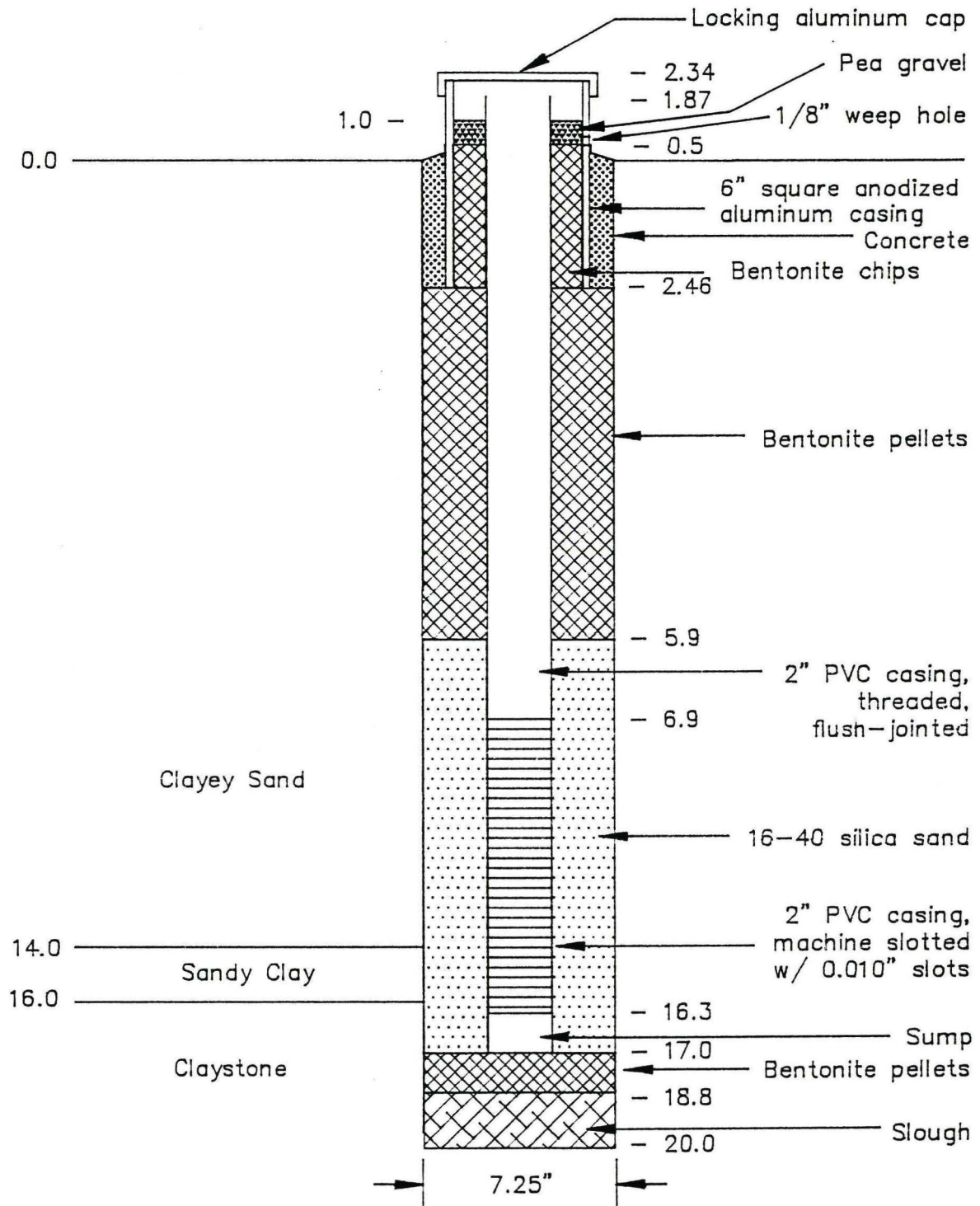
Screen Opening Size: .02"

Screen Bottom Depth: 70'
Elev: 5152.12'

Total Well Depth: 70' Elev: 5152.12'



S-101 COMPLETION DIAGRAM



Notes:

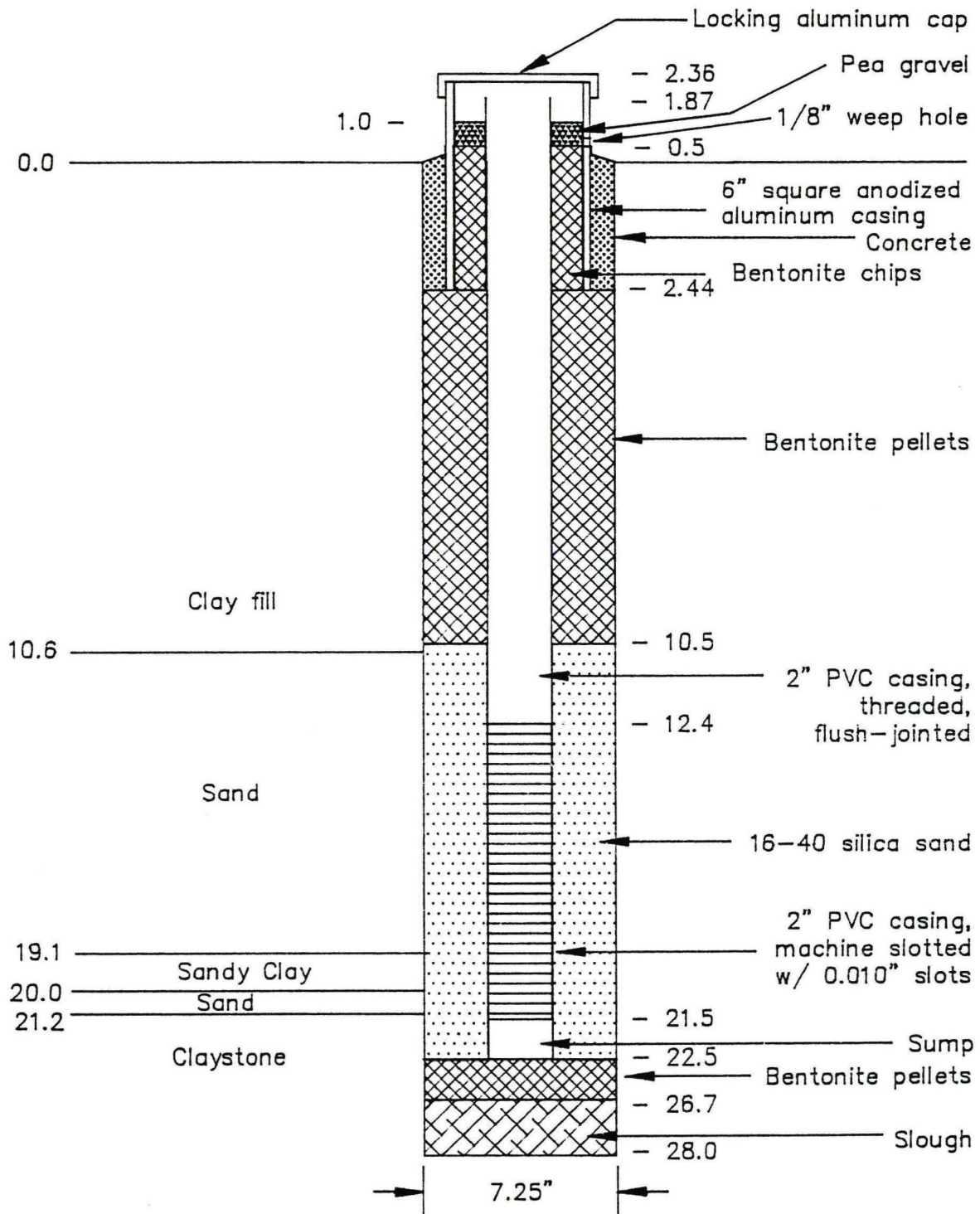
1. All distances in feet from ground surface.
2. Drawing is not to scale.
3. A stainless steel centralizer was placed at the base of the screen and a 1/8-inch diameter hole was drilled in the bottom of the sump.

08/16/91

1202-05

DOTY & ASSOCIATES

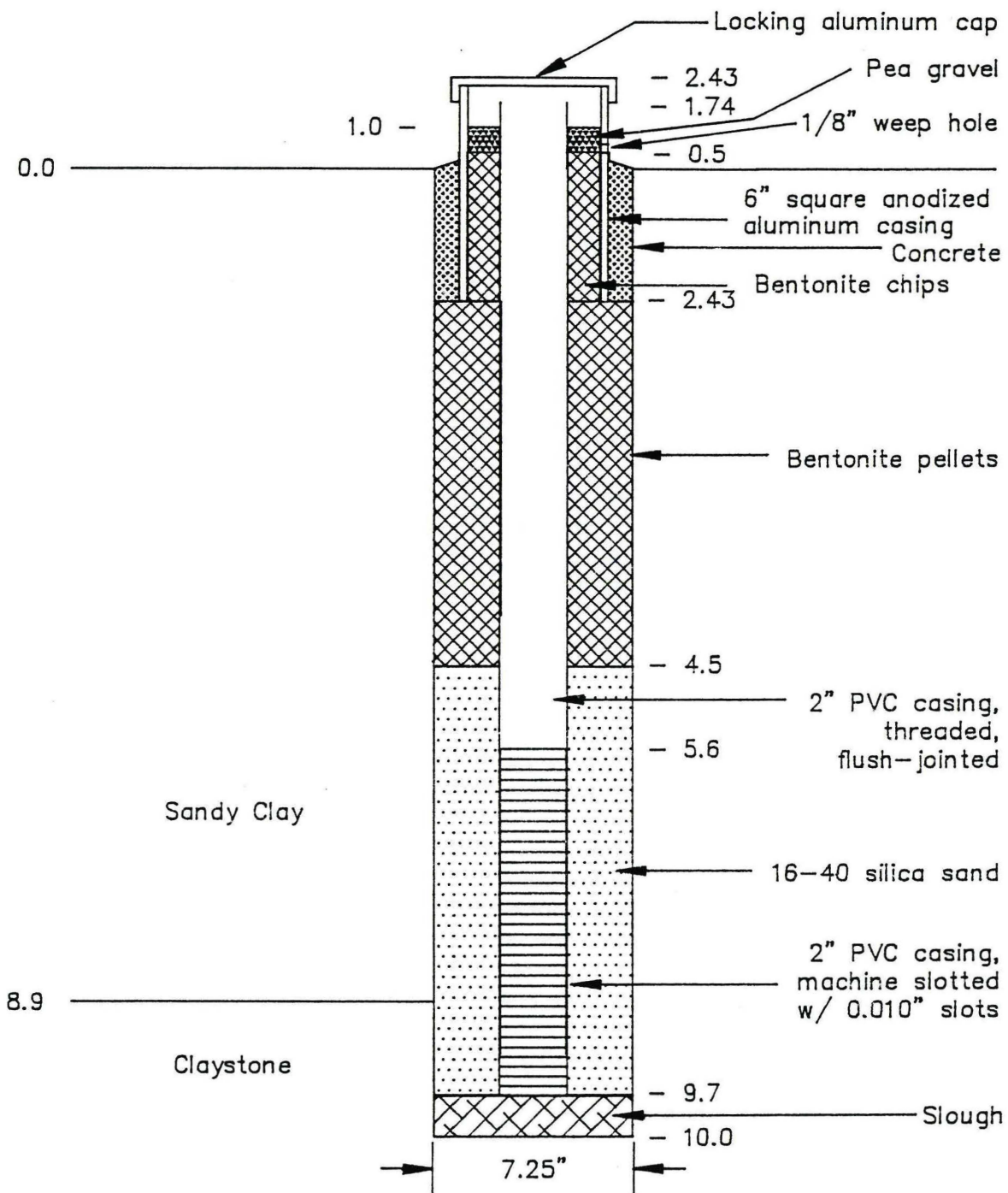
S-102 COMPLETION DIAGRAM



Notes:

1. All distances in feet from ground surface.
2. Drawing is not to scale.
3. A stainless steel centralizer was placed at the base of the screen and a 1/8-inch diameter hole was drilled in the bottom of the sump.

S-105 COMPLETION DIAGRAM



Notes:

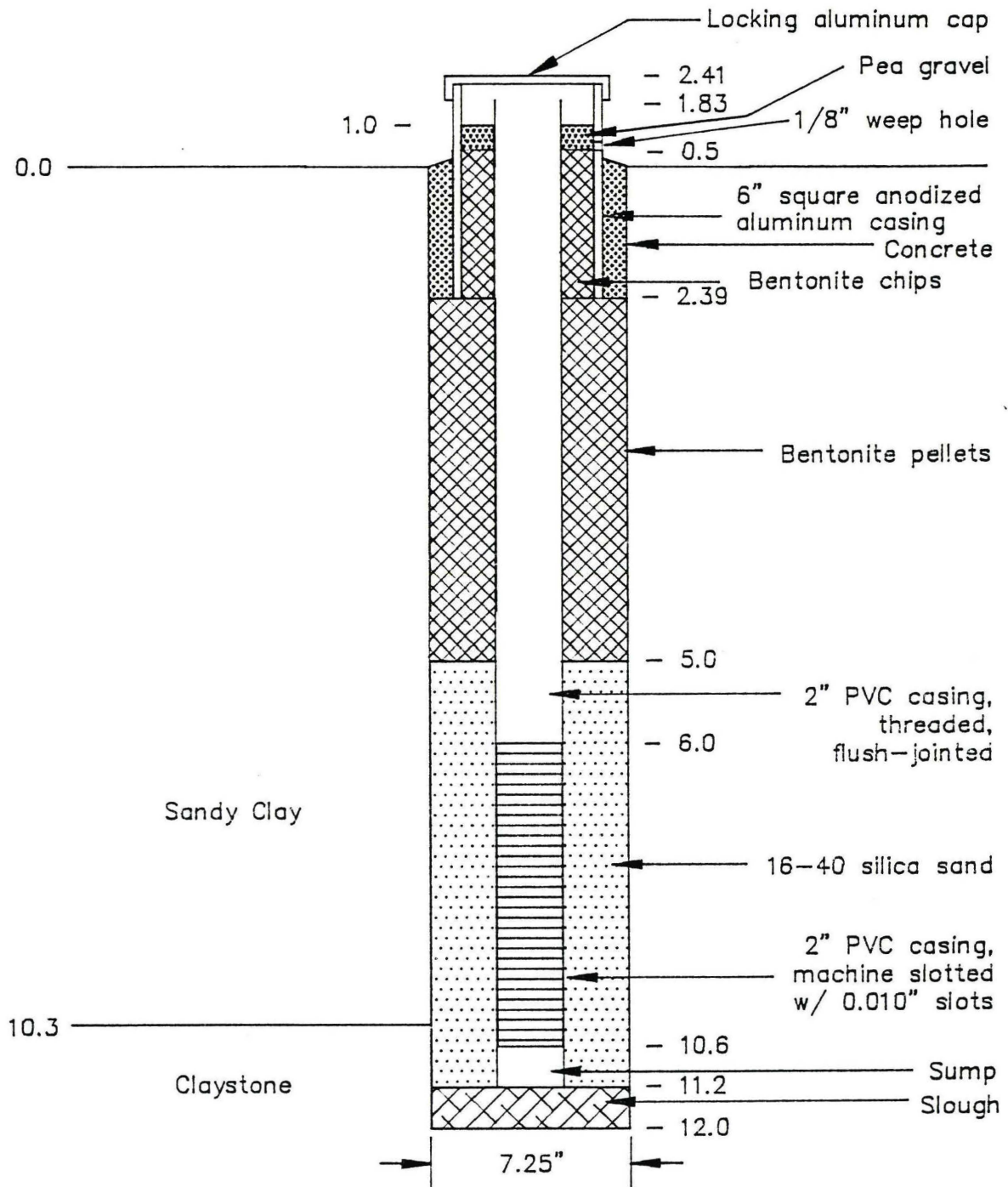
1. All distances in feet from ground surface.
2. Drawing is not to scale.
3. A stainless steel centralizer was placed at the base of the screen and a 1/8-inch diameter hole was drilled in the bottom end cap.

DOTY & ASSOCIATES

1202-05

08/16/91

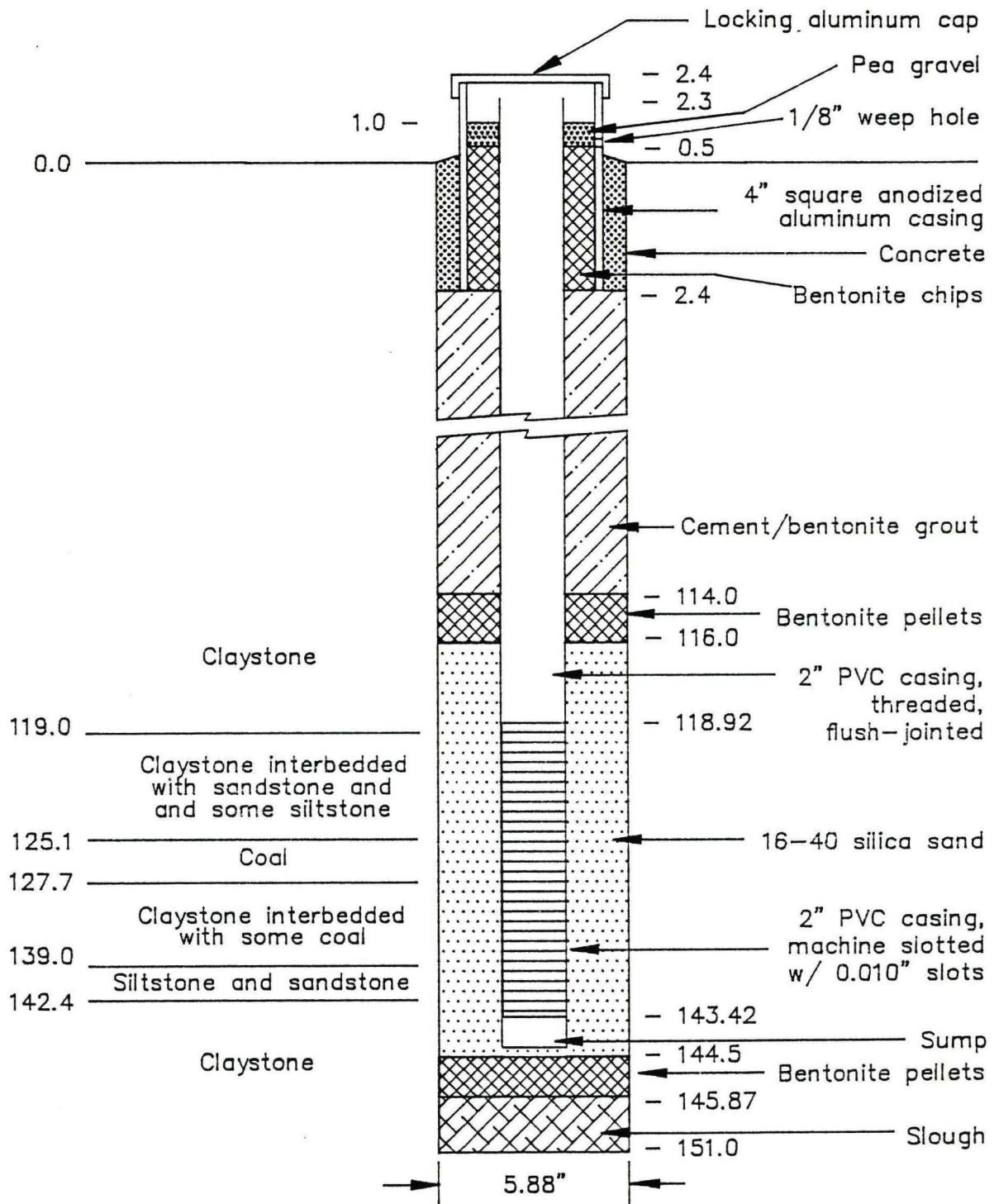
S-106 COMPLETION DIAGRAM



Notes:

1. All distances in feet from ground surface.
2. Drawing is not to scale.
3. A stainless steel centralizer was placed at the base of the screen and a 1/8-inch diameter hole was drilled in the bottom of the sump.

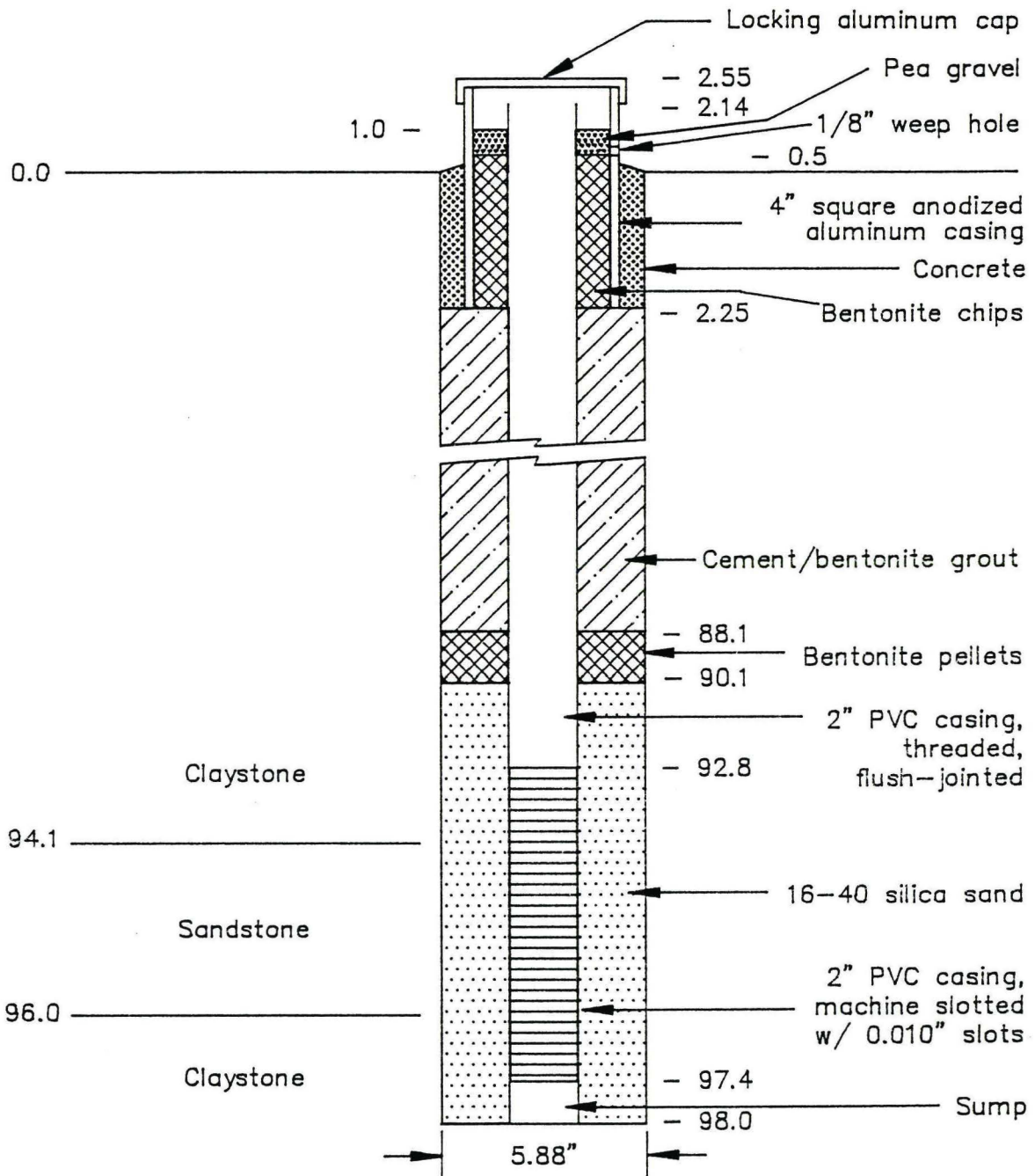
S-201 COMPLETION DIAGRAM



Notes:

1. All distances in feet from ground surface.
2. Drawing is not to scale.
3. A stainless steel centralized was placed at the base of the screen and a 1/8-inch diameter hole was drilled in the bottom of the sump.

S-202 COMPLETION DIAGRAM



Notes:

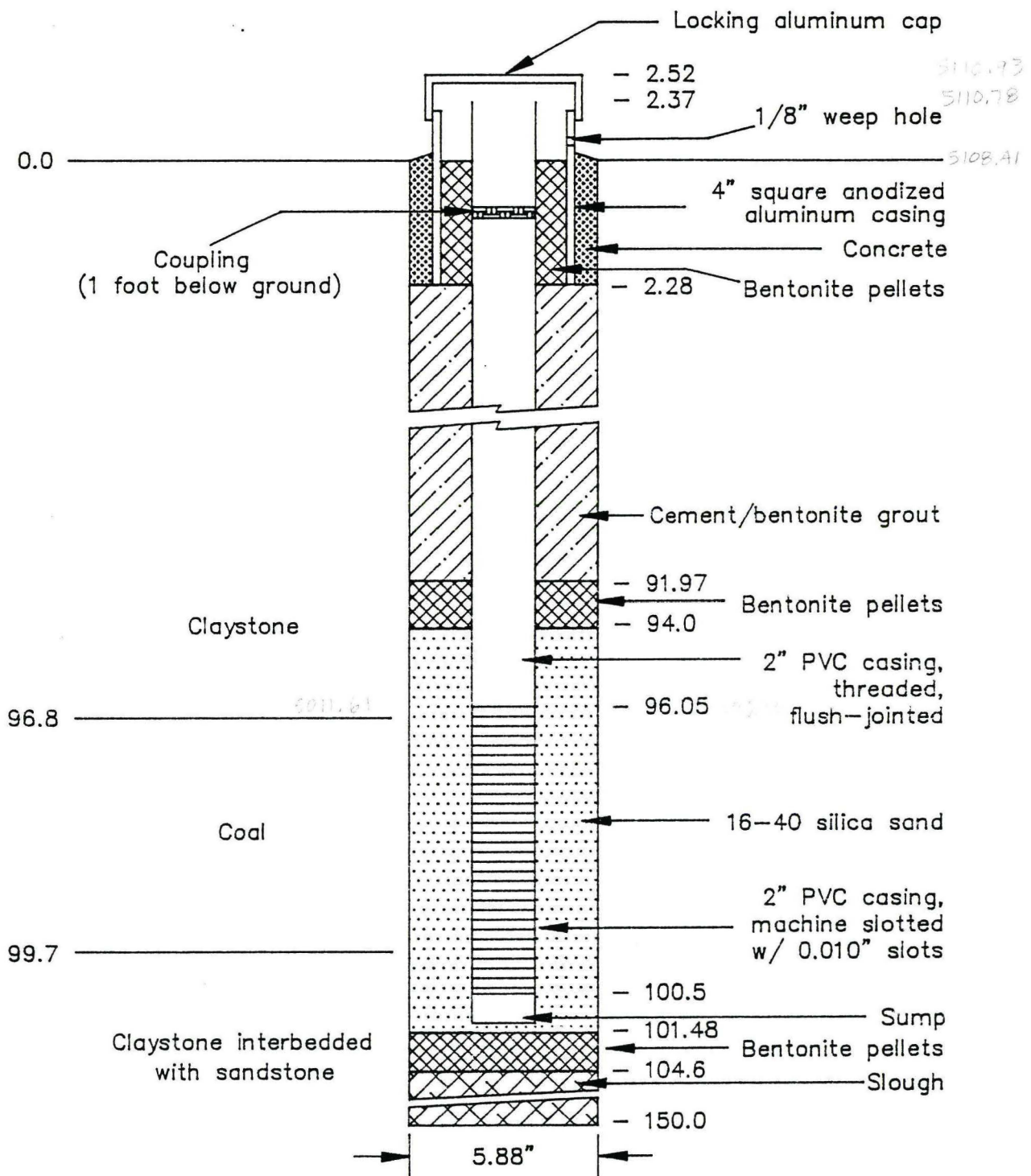
1. All distances in feet from ground surface.
2. Drawing is not to scale.
3. A stainless steel centralizer was placed at the base of the screen and a 1/8-inch diameter hole was drilled in the bottom of the sump.

08/14/91

1202-05

DOTY & ASSOCIATES

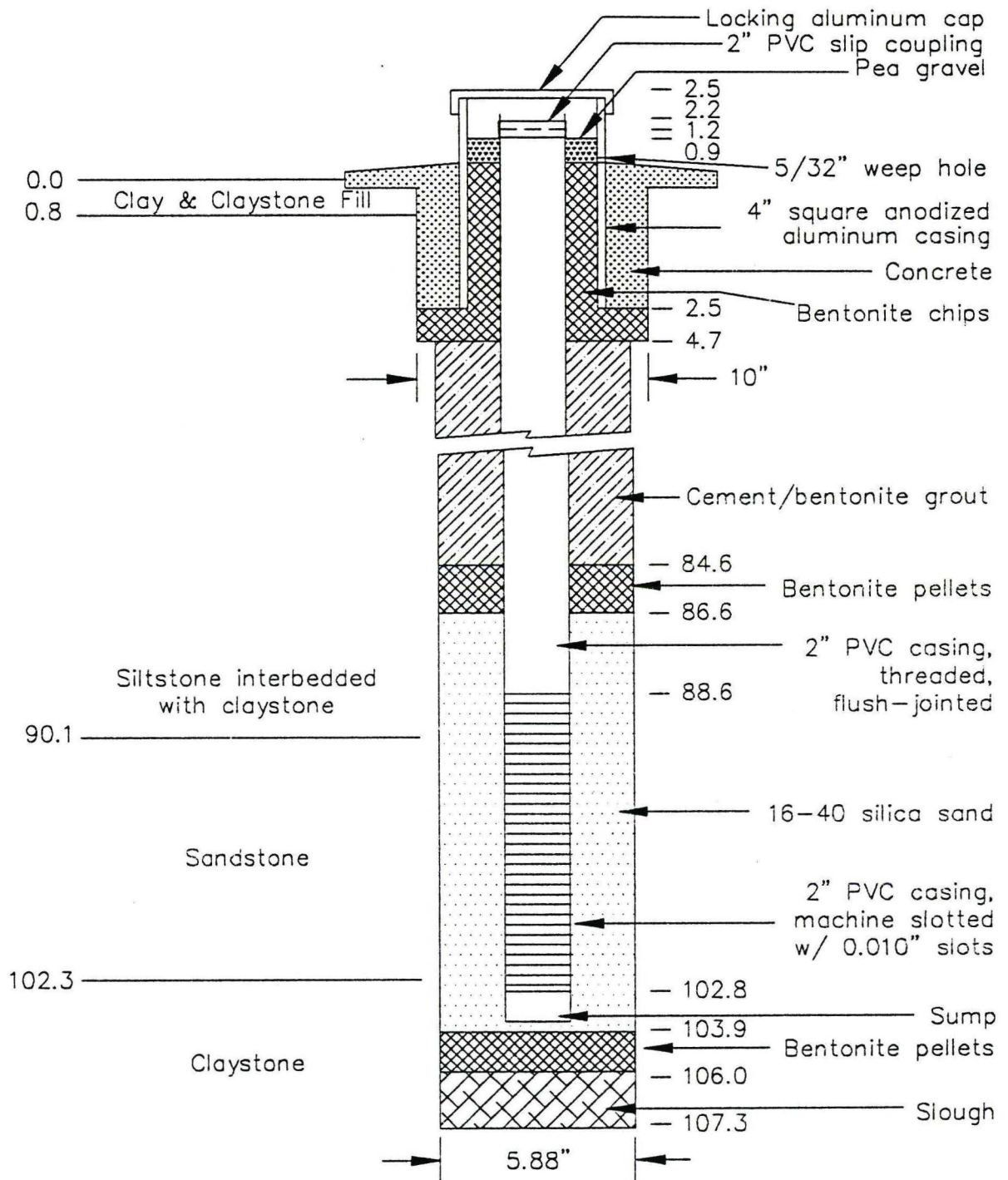
S-203 COMPLETION DIAGRAM (AFTER REPAIRS)



Notes:

1. All distances in feet from ground surface.
2. Drawing is not to scale.
3. A stainless steel centralized was placed at the base of the screen and a 1/8-inch diameter hole was drilled in the bottom of the sump.

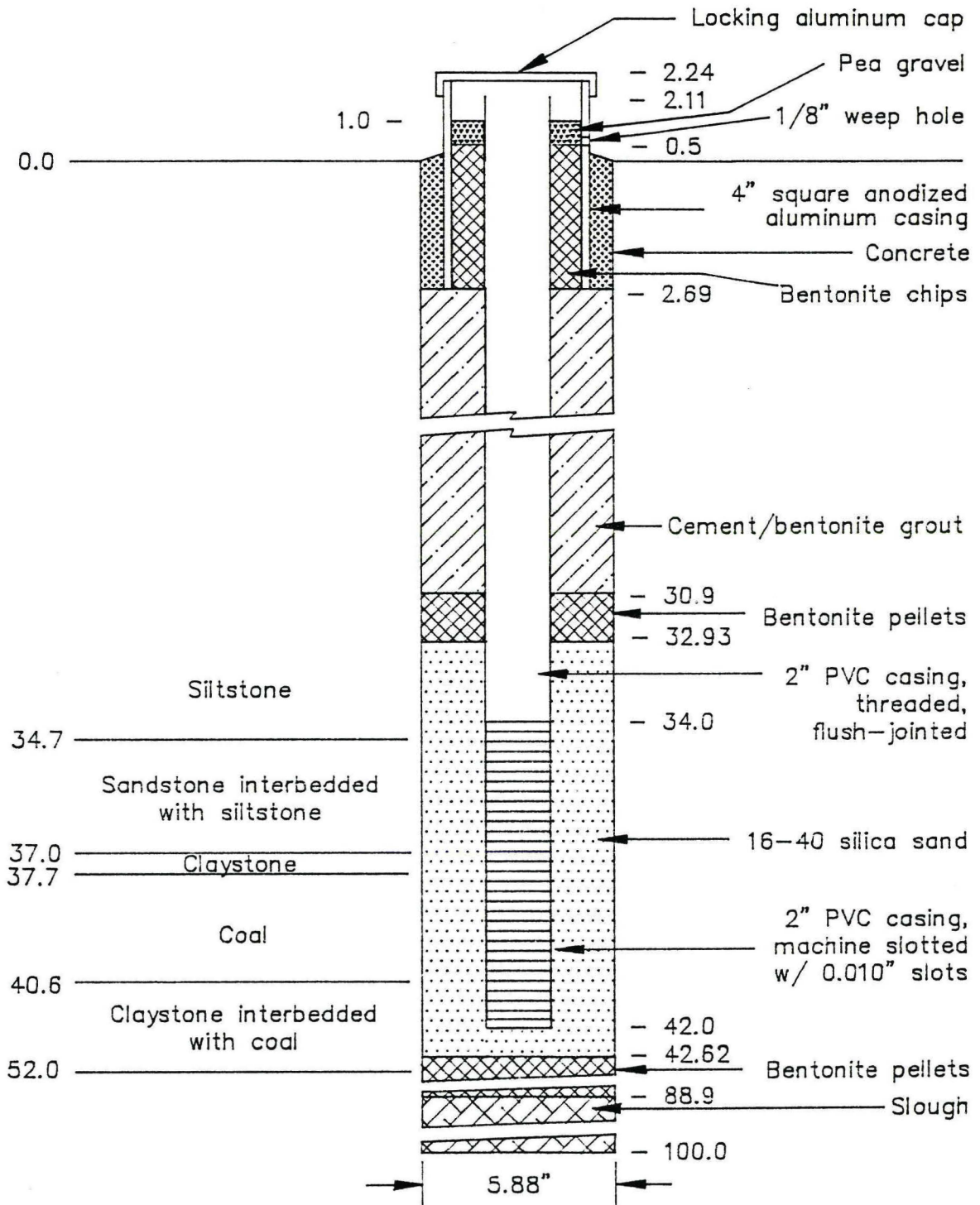
S-204 COMPLETION DIAGRAM (AFTER EXTENSION)



Notes:

1. All distances in feet from ground surface.
2. Drawing is not to scale.
3. A stainless steel centralized was placed at the base of the screen and a 1/8-inch diameter hole was drilled in the bottom of the sump.
4. Well extended 3-24-94.
5. PVC slip coupling connection secured w/ stainless steel set screws and wrapped w/ polyethylene sheeting.

S-205 COMPLETION DIAGRAM



Notes:

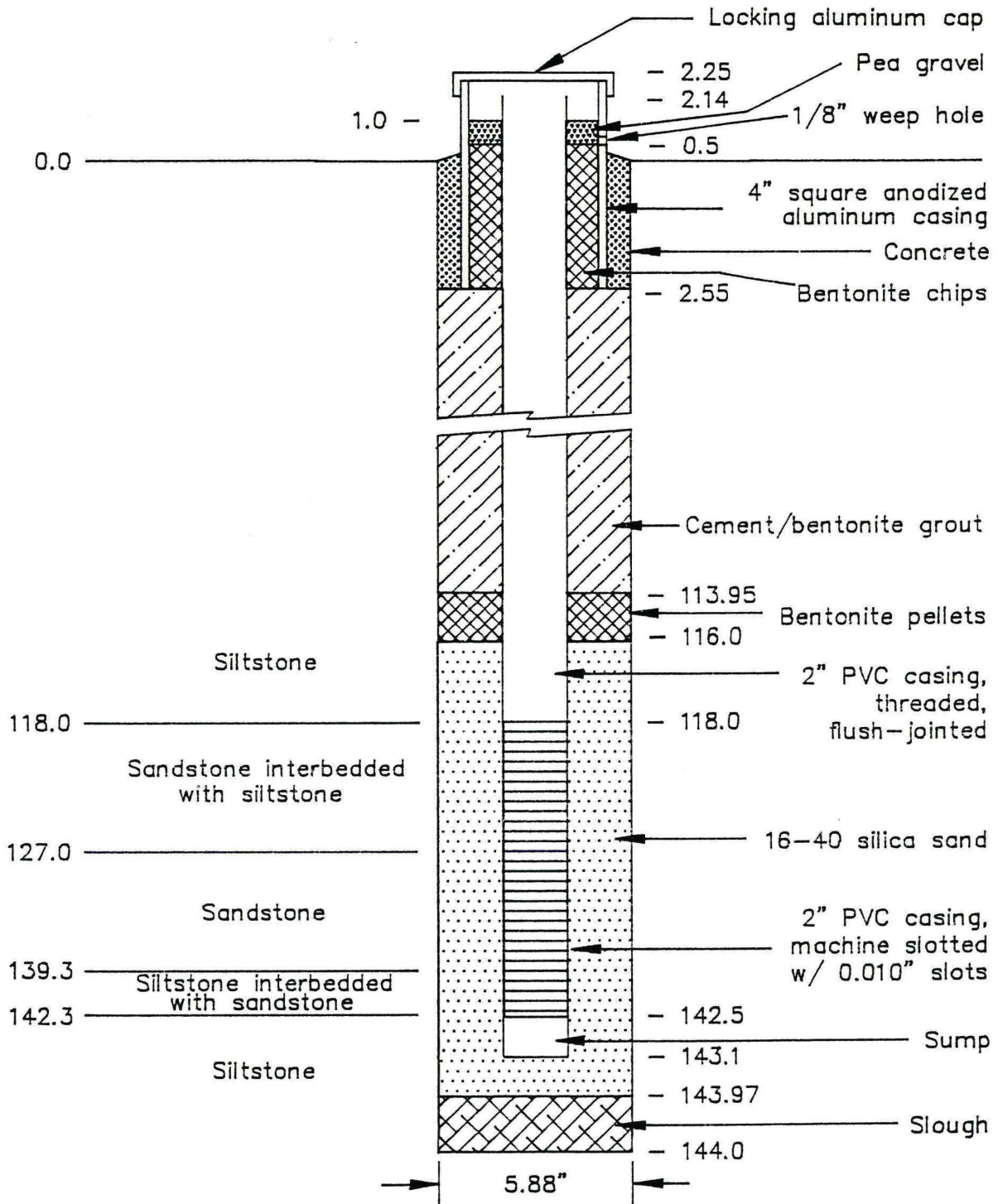
1. All distances in feet from ground surface.
2. Drawing is not to scale.
3. A stainless steel centralized was placed at the base of the screen and a 1/8-inch diameter hole was drilled in the bottom of the sump.

08/15/91

1202-05

DOTY & ASSOCIATES

S-206 COMPLETION DIAGRAM



Notes:

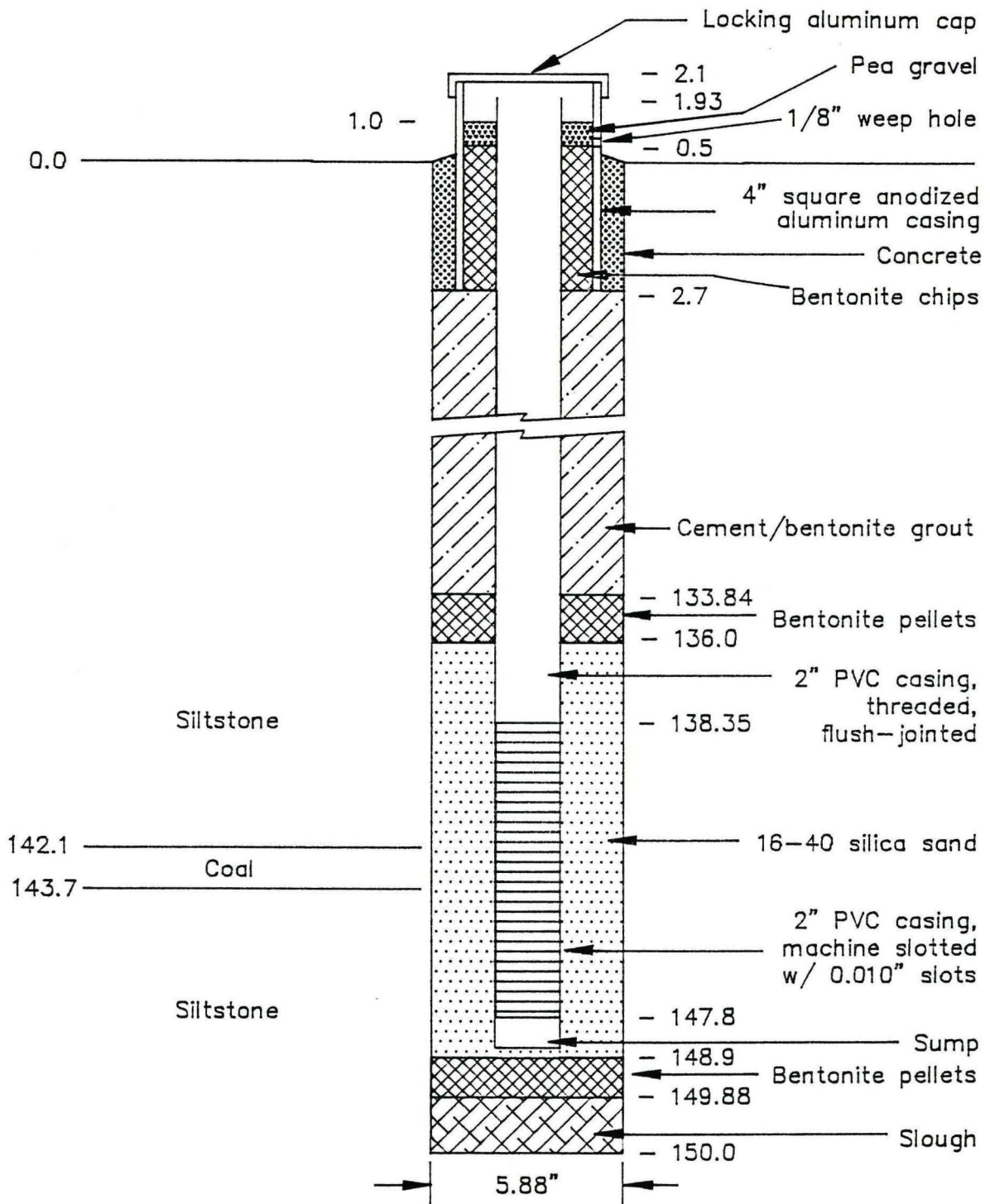
1. All distances in feet from ground surface.
2. Drawing is not to scale.
3. A stainless steel centralized was placed at the base of the screen and a 1/8-inch diameter hole was drilled in the bottom of the sump.

08/15/91

1202-05

DOTY & ASSOCIATES

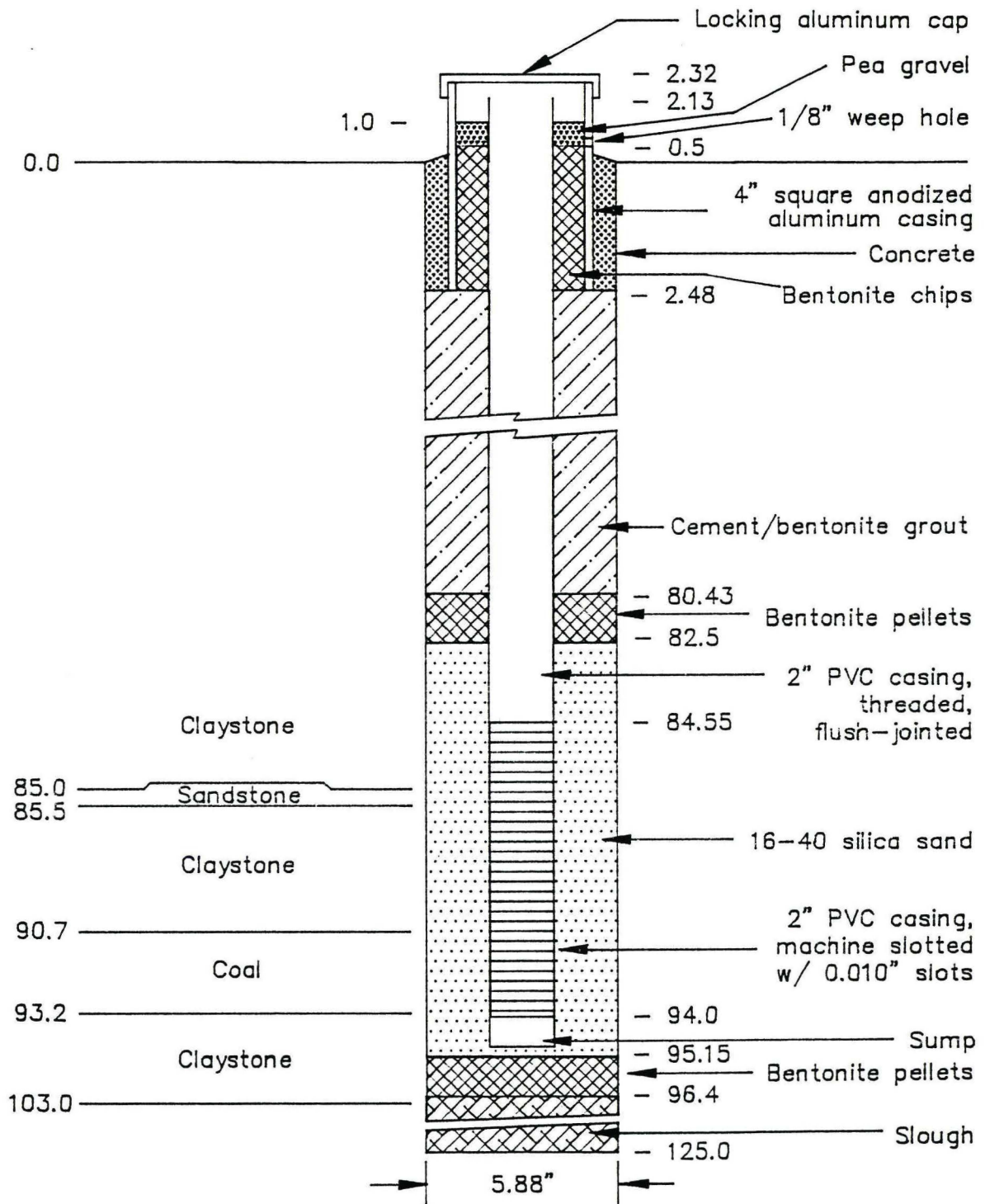
S-208 COMPLETION DIAGRAM



Notes:

1. All distances in feet from ground surface.
2. Drawing is not to scale.
3. A stainless steel centralized was placed at the base of the screen and a 1/8-inch diameter hole was drilled in the bottom of the sump.

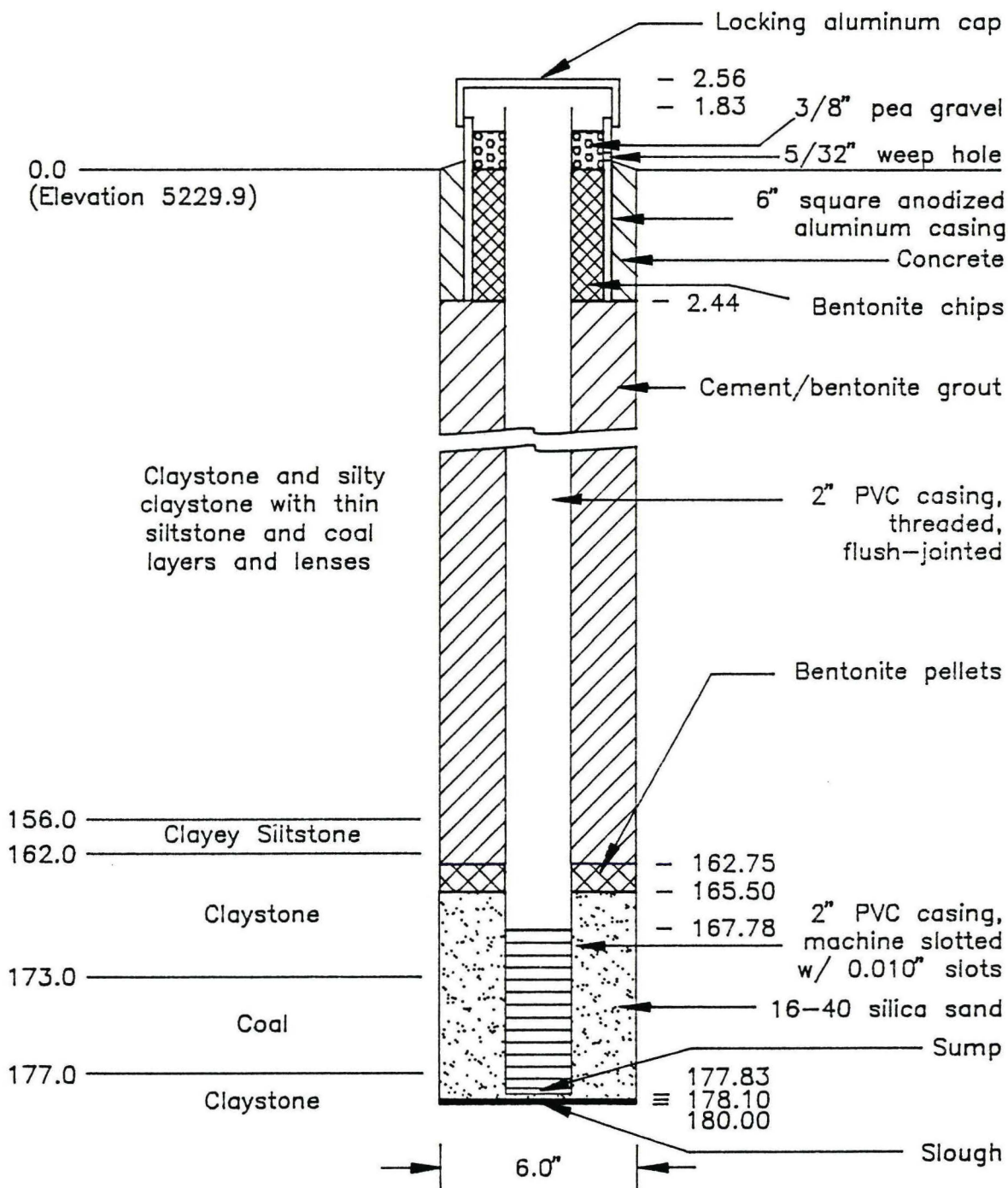
S-209 COMPLETION DIAGRAM



Notes:

1. All distances in feet from ground surface.
2. Drawing is not to scale.
3. A stainless steel centralized was placed at the base of the screen and a 1/8-inch diameter hole was drilled in the bottom of the sump.

S-210 COMPLETION DIAGRAM



Notes:

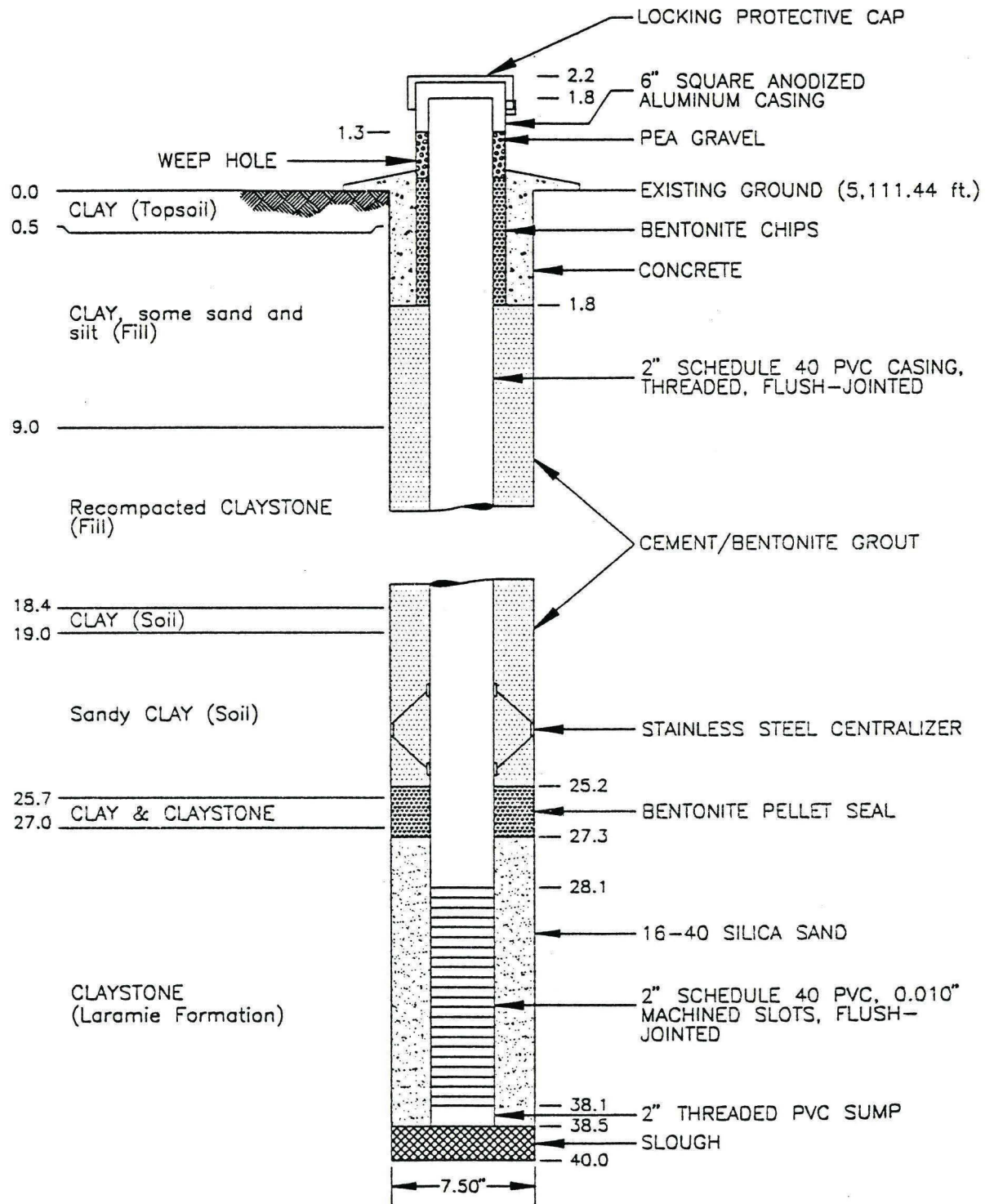
1. All depths in feet from ground surface.
2. Drawing is not to scale.
3. One PVC centralizer attached to middle of screen.
4. Four 1/8-inch holes drilled in bottom of PVC sump.
5. PVC sump from 177.48 to 177.83 feet.
6. Well installed on 06/03/92

DOTY & ASSOCIATES

1202-10

07/13/92

S-211 COMPLETION DIAGRAM



NOTES:

1. ALL DISTANCES IN FEET FROM GROUND SURFACE.
2. DRAWING NOT TO SCALE.
3. A 1/4-INCH HOLE WAS DRILLED IN THE BOTTOM OF THE SUMP.
4. WELL INSTALLED ON 11/03/93.